

rare for a given polymorphism to be exclusively present or absent in one of the three most-studied continental populations - African, Asian and European. 'In most cases of documented interethnic pharmacogenomic differences, the mean difference between any two populations is substantially smaller than the variation among individuals comprising these populations', explains Suarez-Kurtz. Recognition of interethnic differences in drug response might be useful in the establishment

of public health policies and in the design and interpretation of clinical trials. 'More, questionably, such information may also guide clinicians to prospectively evaluate those patients with the greatest probability of expressing a variant genotype', he concludes.

Reference

- 1 Choudhry, S. et al. (2005) Pharmacogenetic differences in response to albuterol between Puerto Ricans and Mexicans with asthma. *Am. J. Respir. Crit. Care Med.*, 171, 563-570

heart beat faster than normal. This can cause unpleasant palpitations and breathlessness. The blood is not pumped out of the heart as well as it should be and can pool and clot. If the blood clot leaves the heart it can lodge in an artery in the brain, causing a stroke.

The team assessed the occurrence and characteristics of strokes in 4060 patients in both treatment groups in the follow-up to the AFFIRM (Atrial Fibrillation Follow-up Investigation of Rhythm Management) study, ranging from two to six years. 211 patients had a stroke, of which 157 had an ischemic stroke, 34 had a primary intraparenchymal haemorrhage, and 24 had a subdural or subarachnoid haemorrhage.

They analyzed the relationship of several variables for risk of ischemic stroke, which is caused by decreased blood flow to a part of the brain, most commonly due to narrowing of blood vessels or an embolism. 84% of the rate control patients and 52% of the sinus rhythm control patients received warfarin throughout the study. 211 patients (8%) had a stroke event. Ischemic stroke (6.3%) was the most common type. The researchers found seven variables were significantly associated with risk of stroke, including increasing age, female gender, the episode of atrial fibrillation, which qualified the patient for the study lasting two or more days, a history of stroke or TIA (mini-stroke), and a history of diabetes.

The presence of atrial fibrillation was associated with a 60% increase in risk of having an ischemic stroke and the use of warfarin was associated with a 69% decrease in stroke risk. Weissberg said the study pointed to the need for a new prospective trial to provide a definitive answer as to whether warfarin should be continued in patients who have returned to normal rhythm. 'It is important to confirm the findings of the present study before changing treatment policy since warfarin treatment carries substantial risk of bleeding problems, and if adopted outside the carefully monitored environment of a clinical trial, could lead to a lot of problems'.

Anticoagulation therapy for stroke

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Anti-clotting drug warfarin might reduce the risk of stroke by more than two-thirds in patients with atrial fibrillation, a condition that puts patients at high risk of stroke, according to US researchers. 'These data suggest that the beneficial effect of warfarin therapy exists not only for patients experiencing atrial fibrillation but also for patients who have a history of atrial fibrillation but who are presumably in sinus rhythm', wrote the team led by David Sherman, University of Texas Health Science Center, San Antonio, USA.

Continued stroke risk

'Anticoagulation therapy should be maintained in patients who have a history of atrial fibrillation and risk factors for stroke, even when the recurrent atrial fibrillation has not been documented', they said in the study published in the *Archives of Internal Medicine*. A large multi-centre study of the two treatments for atrial fibrillation, rate control or sinus rhythm control therapy, found no difference in the risk of death for patients treated with either therapy.

Treatment with warfarin was included in both therapies, although patients in the sinus rhythm control group could stop warfarin after at least four weeks of maintained sinus rhythm while receiving an anti-arrhythmic

drug. Patients in atrial fibrillation at the time of stroke had a 60% greater chance of having an ischemic stroke and those taking warfarin at the time of follow up had a 69% decreased risk of an ischemic stroke, found the study.

'Elderly patients who have experienced atrial fibrillation... should be anticoagulated with warfarin regardless of their current rhythm.'

British Heart Foundation Medical Director, Professor Peter Weissberg said the fact that warfarin prevents stroke in atrial fibrillation is well established. 'The surprising finding in this study is that even when the patients were thought to have been returned permanently to normal rhythm, they still had a risk of stroke that was reduced if they continued warfarin', said Weissberg.

'The study suggests that in elderly patients who have experienced atrial fibrillation, they should be anticoagulated with warfarin regardless of their current rhythm. This would require many more patients than is currently the case taking warfarin into old age', he added.

Atrial fibrillation

Atrial fibrillation is an abnormal heart rhythm in which the upper two chambers of the